Front Country Trails
Multi-Jurisdictional Task Force

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**AGENDA DATE:** July 1, 2009

**TO:** Front Country Trails Multi-Jurisdictional Task Force

**FROM:** Front Country Trails Task Force Staff

**SUBJECT:** **Universal Trail Assessment Process (UTAP) and Trails Survey Project**

**RECOMMENDATION:** That the Front Country Trails (FCT) Multi-Jurisdictional Task Force receives a presentation regarding the Universal Trail Assessment Process (UTAP) and concurs with the recommendation to develop and implement a Trails Survey Project with either volunteers or Beneficial Designs.

**DISCUSSION:**

Background

The Task Force received a presentation on trail assessment methods at the February 2008 meeting. The Universal Trail Assessment Process (UTAP) was identified as a potential tool to collect FCT trail data for several reasons. First, UTAP can be used to create a record of trail conditions and maintenance needs that has been used by other federal, state, and local land managers and volunteers. Attachment 1 provides general information on the benefits of UTAP, how it can be used, and feedback from land managers. Second, UTAP provides a trail survey method that can be used by all three FCT agencies and integrated with agency mapping tools, such as Geographic Information Systems (GIS). And finally, a third party such as Beneficial Designs provides an unbiased method to collect standardized trail data and to certify trainers. National Park Service staff and volunteers used UTAP to collect data on over 280 miles of Santa Monica Mountains National Recreation Area trails.

UTAP Training

Beneficial Designs, Inc. conducted a weekend UTAP workshop on October 18 and 19, 2008. Organized with the assistance of Stephen Doherty, the workshop was attended by City and County staff and stakeholder representatives, including the Sierra Club, Montecito Trails Foundation, Santa Barbara County Trails Council, Santa Barbara Mountain Bike Trail Volunteers, and Los Padres Forest Association. The training

included lecture, field training, and a written certification exam. The workshop also included techniques and tools for collecting trail data, information regarding TrailWare software, and the trail access information the software provides. Attachment 1, page 5, provides one example of trail access information created with the software, a trail sign. Trail access information can also be used to provide visitor information on a website or in a brochure.

After the workshop, trainees complete one mile of trail assessment to become a certified UTAP Coordinator. Certified Coordinators can then teach and work with other staff and volunteers to collect UTAP data on trails. Prospective UTAP Coordinators will be working in the field to complete certification.

UTAP will help identify and document trail characteristics such as grade, slope, width, surface and trail obstacles. This information can be used to list trail maintenance items, prioritize trail work and create access information for trail users. Attachment 2 provides an overview of UTAP, including more details on the process. Data can be collected with or without the technology of Global Positioning System (GPS) mapping units. UTAP data recorded at each station includes reoccurring measurable parameters and features. Some measurements and features require a minimum or maximum design value. These values need to be determined and agreed upon prior to field assessment in order to provide relevant and consistent data.

Trails Survey Project

FCT stakeholders met in November 2008 as a follow up to UTAP training. Key discussion topics included the standardization of interim and final parameters for data collection, the use of GPS units to collect data, quality control, and the input and sharing of data.

Applying UTAP involves determining which measurements will be collected and the level of detail. In order to move forward with Coordinator certification, there is consensus that interim parameters should be standardized. Standardization of data for practice sessions will provide a similar training experience among coordinators and a baseline for discussion of final data parameters. The interim design standards and the data collected will be for training purposes. The proposed interim parameters for UTAP Coordinator training and certification include design tread width, minimum clearance width, design height and minimum obstruction height are outlined in the table on the following page.

The Coordinators' certification experience will provide more knowledge about applying UTAP to the FCT system. Interim design standards will help determine the amount of data points to be collected, whether additional features should be added, and the usefulness of the data for analysis. Additional features that could be added to the baseline trail assessment include line of sight, drop-offs, and step out areas. Prior to

official trail assessments, more detailed work toward determining final parameters will follow as part of the FCT planning and management process.

| Trail Feature Name | Trail Feature Definition | Proposed Interim Measurement (inches) | Reason for Proposed Interim Standard |
|---|---|---|---|
| Design Tread Width | Width of clear path of travel | 18 | See Minimum Clearance Width. |
| Minimum Clearance Width | Minimum width of trail that occurs within boundary on both sides of trail; may be the same or less than design tread width | 18 | Suggested design standard for equestrians by Beneficial Designs is 12“, but consensus was that 12” would result in too many measurements for training/certification. |
| Design Height | Vertical height of clear path of travel; measured from trail bed to over head | 120 | Currently used as a height standard for the passage of horse and rider in USFS and other standards. |
| Minimum Obstruction Height | Height or depth of obstruction (e.g. rock or stump) found in the path of travel, as measured from the trail surface; minimum height to be considered a barrier to a user. | 12 | Height of object that may be stepped over easily by the average hiker or horse and rider on FCT; riding skills vary among bike riders (may or may not pose obstruction). |

Use of GPS

GPS units may provide a valuable tool to enhance UTAP data for a number of reasons. GPS trail coordinates can be integrated with GIS to create not only maps but also a database of the locations of signs, gates, and physical trail features. All three FCT agencies currently have GIS capabilities and information could be shared across jurisdictions. The Forest Service currently has GPS data points, although those geo-referenced trail characteristics are limited to constructed features (i.e. water bars, culverts, retaining walls, etc.). UTAP will provide other characteristics, such as tread width, obstructions, and other valuable information that can be used for maintenance and future assessment.

UTAP Challenges

While there are a number of challenges in addition to the opportunities of UTAP, staff believe it is an appropriate tool for trails assessment. Challenges include the overall

coordination of trail assessment and volunteers, the housing of software, the staff to oversee input of data, and the analysis and interpretation of data in order to provide meaningful maintenance information. UTAP requires significant volunteer time to conduct the trails assessment.

Project Cost – Alternate Approaches

There are two approaches to conducting the trail surveys. The low cost approach would include the use of agency staff and volunteers to complete baseline data collection. The estimated direct costs of $2,000 - $2,400 would cover the purchase of two sets of field tools and up to three copies of the TrailWare Software. Many agencies have used volunteers to collect trail data. While it can be very laborious, it provides a valuable opportunity for all trail users to work together and become familiar with trail characteristics. Staff estimates that it could take six to nine months to complete all of the front country trail surveys.

In the second approach, the agencies would contract with Beneficial Designs to collect the baseline data at a cost of $4,350. The agencies would also need to purchase at least one set of tools ($900) and up to three copies of the TrailWare Software ($675) for a total estimated cost of $5,925. Beneficial Designs has developed a High Efficiency Trail Assessment Process that automates the collection of trail information at an estimated speed of 1 hour per mile of trail. The baseline assessment and analysis for the front country trails could be complete in as little as five days. Using a third party, such as Beneficial Designs, would provide an unbiased source of data and relieve volunteers to provide assistance with the more detailed trail survey work, including line of sight, drop-offs, and step out areas.

Preliminary Project Schedule

If the agencies and workshop participants complete the UTAP certification process by late August, the Task Force could review the final survey parameters at its September meeting. If Beneficial Designs is contracted to complete baseline surveys, they could be complete in early fall. If volunteers are used, it is likely the surveys would not be complete until late spring/early summer 2010.

**Recommendation**

City, County, and Forest Service staff recommends moving forward with the trail survey process utilizing UTAP, including the interim parameters, as discussed above. UTAP is recognized as a system that provides accurate, verifiable, and consistent information. UTAP will provide needed baseline information for FCT management. Additionally, UTAP design standards can be tailored to fit the needs of the trails and longer-term FCT management recommendations.

**ATTACHMENTS:** 1) UTAP TAC Newsletter Spring 2003
2) UTAP Overview

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**APPROVED BY:** Jill E. Zachary, Assistant Parks and Recreation Director